CLAIMS

We claim:

1. A composition comprising an antigen binding fragment of an antibody, wherein the antibody specifically recognizes C-antigen, wherein C-antigen is the antigen specifically recognized by an antibody comprising a H chain V region having the amino acid sequence of SEQ. ID NO:2 and a L chain V region having the amino acid sequence of SEQ ID NO:5.

2. The composition according to claim 1, wherein the antigen binding fragment is selected from the group consisting of whole native antibodies, bispecific antibodies, chimeric antibodies, Fab, F(ab')2, single chain V region fragments (scFv) and fusion polypeptides, wherein the fusion polypeptide comprises the antigen binding fragment fused to a chemically functional moiety.

3. The composition according to claim 2 wherein the whole native antibody is a αC antibody.

4. The composition according to claim 3, wherein the αC antibody is designated H11 and comprises H chains having the amino acid sequence of SEQ ID NO:2 and a L chain having the amino acid sequence of SEQ ID NO:5.

5. The composition according to claim 2, wherein the scFv is substantially the same as SEQ ID NOS:14 and 17.

6. The composition according to claim 2, wherein the moiety is selected from the group consisting of signal peptides, agents that enhance immunologic reactivity, agents

that facilitate coupling to a solid support, vaccine carriers, bioresponse modifiers, toxins, detectable labels, paramagnetic labels, and drugs.

7. The composition according to claim 6, wherein the signal peptide is prokaryotic or eukaryotic.

8. The composition according to claim 7, wherein the signal peptide is eukaryotic.

9. The composition according to claim 6, wherein the agent that enhances immunologic reactivity is a bacterial super antigen.

10. The method according to claim 6, wherein the agent that facilitates coupling to a solid support is selected from the group consisting of biotin and avidin.

11. The composition according to claim 6, wherein the immunogen carrier is selected from the group consisting of any physiologically acceptable buffer.

12. The composition according to claim 6, wherein the bioresponse modifier is a cytokine.

13. The composition according to claim 12, wherein the cytokine is selected from the group consisting of tumor necrosis factor, interleukin-2, interleukin-4, interleukin-12, granulocyte macrophage colony stimulating factor and γ-interferons.

14. The composition according to claim 6, wherein the drug is an antineoplastic agent selected from the group consisting of radioisotopes, vinca alkaloids, adriamycin,

bleomycin sulfate, Carboplatin, Cisplatin, cyclophosphamide, Cytarabine, Dacarbazine, Dactinomycin, Duanorubicin hydrochloride, Doxorubicin hydrochloride, Etoposide, fluorouracil, lomustine, Mechlororethamine hydrochloride, melphalan, mercaptopurine, methotrexate, mitomycin, mitotane, pentostatin, pipobroman, procarbaze hydrochloride, streptozotocin, taxol, thioguanine and Uracil mustard.

15. The composition according to claim 14, wherein the vinca alkaloid is selected from the group consisting of vinblastine sulfate, vincristine sulfate and vindesine sulfate.

16. The composition according to claim 6, wherein the toxin is selected from the group consisting of ricin, radionuclides, pokeweed antiviral protein, Pseudomonas exotoxin A, diphtheria toxin, ricin A chain, restrictocin and phospholipase enzymes.

17. The composition according to claim 16, wherein the detectable label is selected from the group consisting of radioisotopes, fluorescent compounds, colloidal metals, chemiluminescent compounds, bioluminescent compounds, enzymes, substrates, cofactors and inhibitors.

18. A polypeptide comprising at least five consecutive amino acid residues of SEQ ID NOS:2 or 5.

19. The polypeptide according to claim 18, wherein the five consecutive amino acid residues are from a CDR.

20. The polypeptide according to claim 18, further comprising a heterologous immunoglobulin C region.

21. A humanized antibody comprising the polypeptide according to claim 18.

22. A polymeric peptide comprising a plurality of the peptide according to claim 18.

23. The composition according to claim 1, further comprising a pharmaceutically acceptable excipient.

24. The composition according to claim 23, wherein the excipient is a liposome preparation.

25. An immunogenic composition comprising the antigen binding fragment according to claim 1, further comprising a pharmaceutically acceptable excipient and an amount of an adjuvant effective to enhance the immune response.

26. A substantially isolated polynucleotide sequence that encodes an antigen binding fragment of an antibody, wherein the antibody specifically recognizes C-antigen, wherein C-antigen is the antigen recognized by an antibody comprising a H chain V region having the amino acid sequence of SEQ ID NO:2 and a L chain V region having the amino acid sequence of SEQ ID NO:5.

27. A substantially isolated polynucleotide sequence that encodes at least five consecutive amino acid residues of SEQ ID NOS:2 or 5.

28. The polynucleotide according to claim 32, wherein the encoding sequence is within SEQ ID NO:1.

29. The polynucleotide according to claim 28, wherein the encoding sequence is within SEQ ID NO:4.

30. The polynucleotide according to claim 28, wherein the polynucleotide encodes at least five consecutive amino acid residues of a CDR.

31. An isolated polynucleotide comprising a region of at least 20 consecutive nucleotides that is capable of selectively forming a stable duplex with a polynucleotide consisting of SEQ. ID NO:1 or 3.

32. An isolated polynucleotide comprising a region of at least 20 consecutive nucleotides that is capable of selectively forming a stable duplex with a polynucleotide consisting of SEQ. ID NO:4 or 6.

33. The polynucleotide according to claim 26, wherein the polynucleotide is a cloning vector.

34. The polynucleotide according to claim 26, wherein the polynucleotide is an expression vector.

35. The expression vector according to claim 34, wherein the expression vector is vaccinia.

36. A host cell comprising a polynucleotide according to claim 32.

37. A pharmaceutical composition comprising the polynucleotide of claim 26 and a pharmaceutically acceptable excipient.

38. An immunogenic composition comprising the polynucleotide sequence according to claim 26 and a pharmaceutically acceptable excipient.

39. A method of treating a patient with a neoplasia comprising administering to the patient an effective amount of the antigen binding fragment according to claim 1.

40. The method according to claim 39, wherein the individual has a clinically detectable tumor.

41. The method according to claim 39, which is a method for palliating the neoplasia.

42. The method according to claim 39, wherein a tumor that was previously detected in the individual has been treated and is clinically undetectable at the time of the administering of the antigen binding fragment.

43. The method according to claim 39, which is a method of reducing the risk of recurrence of a clinically detectable tumor.

44. The method according to claim 39, wherein administration of the antigen binding fragment is by parenteral administration selected from the group consisting of subcutaneous, intramuscular, intraperitoneal, intracavity, intrathecal, transdermal, or intravenous injection.

45. The method according to claim 39, wherein the administration is at a dosage of about 0.01 mg/kg/dose to about 2000 mg/kg/dose.

46. The method according to claim 39, wherein the antigen binding fragment is labeled with a therapeutic moiety.

47. The method according to claim 46, wherein the therapeutic moiety is selected from the group consisting of radioisotopes, antineoplastic agents, immunomodulators, biological response modifiers, lectins and toxins.

48. A composition comprising substantially purified C-antigen, wherein C antigen is the antigen specifically recognized by an antibody comprising a H chain V region having the amino acid sequence of SEQ ID NO:2 and a L chain V region having the amino acid sequence of SEQ ID NO:5.

49. The composition according to claim 48, wherein the C-antigen is present in an immunogenic amount and further wherein the composition includes an amount of adjuvant effective to enhance an immune response to the C antigen.

50. A method for detecting C-antigen in a sample, comprising the steps of:

a) contacting the sample with the antigen binding fragment according to claim 1 under conditions that permit the formation of a stable antibody-antigen complex; and

b) detecting any stable complex formed in step a)

wherein C-antigen is the antigen specifically recognized by an antibody comprising a H chain having the amino acid sequence of SEQ ID NO:2 and a L chain V region having the amino acid sequence of SEQ ID NO:5.